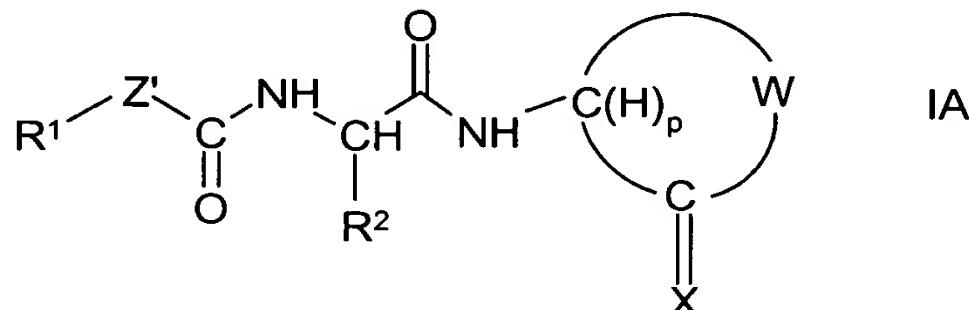


CLAIM SUMMARY DOCUMENT

Kindly cancel Claims 99-112 and 121-130 without prejudice or disclaimer.

99-117. Canceled.

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118. (Currently Amended) A method for inhibiting β -amyloid peptide synthesis and/or release in a mammalian subject thereby inhibiting onset of diseases mediated by β -amyloid peptide which method comprises administering to said mammalian subject a pharmaceutical composition comprising a pharmaceutically inert carrier and an effective amount of a compound or a mixture of compounds of formula IA:



wherein R¹ is selected from the group consisting of:

- A) alkyl of from 1 to 10 carbon atoms;
- B) alkenyl of from 2 to 10 carbon atoms and 1-2 sites of alkenyl unsaturation;
- C) alkynyl of from 2 to 10 carbon atoms and from 1-2 sites of alkynyl unsaturation;
- D) cycloalkyl of from 3 to 12 carbon atoms;
- E) cycloalkenyl of from 4 to 8 carbon atoms;
- F) substituted alkyl of from 1 to 10 carbon atoms, having from 1 to 5 substituents selected from:
 - 1) alkoxy of from 1 to 10 carbon atoms;
 - 2) substituted alkoxy of the formula substituted alkyl-O- where substituted alkyl is as defined in F herein;
 - 3) cycloalkyl which is as defined in D herein;
 - 4) substituted cycloalkyl is defined in I herein;

- E'
- 5) cycloalkenyl which is defined in E herein;
 - 6) substituted cycloalkenyl which is defined in J herein;
 - 7) acyl selected from alkyl-C(O)-, substituted alkyl-C(O)-, cycloalkyl-C(O)-, substituted cycloalkyl-C(O)-, aryl-C(O)-, heteroaryl-C(O)- and heterocyclic-C(O)- wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein cycloalkyl is defined in D herein; wherein substituted cycloalkyl is defined in I herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 8) acylamino having the formula -C(O)NRR where each R is independently hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, or heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 9) acyloxy selected from alkyl-C(O)O-, substituted alkyl-C(O)O-, cycloalkyl-C(O)O-, aryl-C(O)O-, heteroaryl-C(O)O-, and heterocyclic-C(O)O- wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein cycloalkyl is defined in D herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 10) amino;
 - 11) aminoacyl having the formula -NRC(O)R wherein each R is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, and heterocyclic; wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;

- E /
- 12) aminoacyloxy having the formula -NRC(O)OR wherein each R is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, and heterocyclic; wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 13) cyano;
 - 14) halogen;
 - 15) hydroxyl;
 - 16) carboxyl;
 - 17) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - 18) thiol;
 - 19) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - 20) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - 21) aryl having from 6 to 14 ring carbon atoms, optionally substituted with from 1 to 5 substituents selected from the group consisting of:
 - a) hydroxy;
 - b) acyl as defined in F7 herein;
 - c) acyloxy as defined in F9 herein;
 - d) alkyl as defined in A herein;
 - e) substituted alkyl as defined in F herein;
 - f) alkoxy as defined in F1 herein;
 - g) substituted alkoxy as defined in F2 herein;
 - h) alkenyl as defined in B herein;
 - i) substituted alkenyl as defined in G herein;
 - j) alkynyl as defined in C herein;

E'

- k) substituted alkynyl as defined in H herein;
- l) amino;
- m) aminoacyl as defined in F11 herein;
- n) acylamino as defined in F8 herein;
- o) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
- p) aryl as defined in F21 herein;
- q) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
- r) azido;
- s) carboxyl;
- t) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
- u) cyano;
- v) halo selected from fluoro, chloro, bromo and iodo;
- w) nitro;
- x) heteroaryl as defined in F22 herein;
- y) heterocyclic as defined in F23 herein;
- z) aminoacyloxy as defined in F12 herein;
- aa) oxyacylamino having the formula -OC(O)NRR where each R is independently hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, or heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- bb) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;

C /

- cc) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
- dd) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein;
- ee) thioheteroaryloxy having the formula -S-heteroaryl wherein heteroaryl is defined F22 herein;
- ff) -SO-alkyl wherein alkyl is defined in A herein;
- gg) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
- hh) -SO-aryl wherein aryl is defined in F21 herein;
- ii) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
- jj) -SO₂-alkyl wherein alkyl is defined in A herein;
- kk) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
- ll) -SO₂-aryl wherein aryl is defined in F21 herein;
- mm) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
- nn) trihalomethyl wherein halo is defined in I20 herein;
- oo) mono- and dialkylamino wherein alkyl is defined in A herein;
- pp) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
- qq) mono- and di-arylamino wherein aryl is defined in F21 herein;
- rr) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
- ss) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein;
- tt) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is

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- defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- 22) heteroaryl of from 1 to 15 ring carbon atoms and 1 to 4 ring heteroatoms selected from oxygen, nitrogen and sulfur, optionally substituted with from 1 to 5 substituents selected from:
- a) alkyl as defined in A herein;
 - b) substituted alkyl as defined in F herein;
 - c) alkoxy as defined in F1 herein;
 - d) substituted alkoxy as defined in F2 herein;
 - e) aryl as defined in F21 herein;
 - f) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - g) halo selected from fluoro, chloro, bromo and iodo;
 - h) nitro;
 - i) heteroaryl as defined in F22 herein;
 - j) thiol;
 - k) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - l) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - m) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein; and
 - n) trihalomethyl wherein halo is defined in I20 herein;
- 23) heterocyclic of from 1 to 15 ring carbon atoms and from 1 to 4 ring atoms selected from nitrogen, sulfur and oxygen, optionally substituted with from 1 to 5 substituents selected from:
- a) alkyl as defined in A herein;
 - b) substituted alkyl as defined in F herein;
 - c) alkoxy as defined in F1 herein;

- E /
- d) substituted alkoxy as defined in F2 herein;
 - e) aryl as defined in F21 herein;
 - f) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - g) halo selected from fluoro, chloro, bromo and iodo;
 - h) nitro;
 - i) heteroaryl as defined in F22 herein;
 - j) thiol;
 - k) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - l) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - m) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein; and
 - n) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- 24) aryloxy of the formula -O-aryl wherein aryl is defined in F21 herein;
- 25) heteroaryloxy of the formula -O-heteroaryl wherein heteroaryl is defined in F22 herein;
- 26) hydroxyamino;
- 27) alkoxyamino wherein alkoxy is defined in F1 herein;
- 28) nitro;
- 29) -SO-alkyl wherein alkyl is defined in A herein;
- 30) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
- 31) -SO-aryl wherein aryl is defined in F21 herein;
- 32) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
- 33) -SO₂-alkyl wherein alkyl is defined in A herein;
- 34) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
- 35) -SO₂-aryl wherein aryl is defined in F21 herein;

- E /
- 36) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 37) mono- and dialkylamino wherein alkyl is defined in A herein;
 - 38) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - 39) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - 40) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - 41) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein;
 - 42) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- G) substituted alkenyl having from 1 to 3 substituents selected from the group consisting of:
- 1) alkoxy as defined in F1 herein;
 - 2) substituted alkoxy as defined in F2 herein;
 - 3) acyl as defined in F7 herein;
 - 4) acylamino as defined in F8 herein;
 - 5) acyloxy as defined in F9 herein;
 - 6) amino;
 - 7) aminoacyl as defined in F11 herein;
 - 8) aminoacyloxy as defined in F12 herein;
 - 9) cyano;
 - 10) halogen selected from fluoro, chloro, bromo and iodo;
 - 11) hydroxyl;
 - 12) carboxyl;

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- 13) carboxylalkyl as defined in F17 herein;
- 14) thiol;
- 15) thioalkoxy as defined in F19 herein;
- 16) substituted thioalkoxy as defined in F20 herein;
- 17) aryl as defined in F21 herein;
- 18) heteroaryl as defined in F22 herein;
- 19) heterocyclic as defined in F2 herein;
- 20) nitro;
- 21) -SO-alkyl wherein alkyl is defined in A herein;
- 22) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
- 23) -SO-aryl wherein aryl is defined in F21 herein;
- 24) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
- 25) -SO₂-alkyl wherein alkyl is defined in A herein;
- 26) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
- 27) -SO₂-aryl wherein aryl is defined in F21 herein;
- 28) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
- 29) mono- and dialkylamino wherein alkyl is defined in A herein;
- 30) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
- 31) mono- and di-arylamino wherein aryl is defined in F21 herein;
- 32) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
- 33) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein; and
- 34) unsymmetric di-substituted amino having different substituents selected from alkyl , substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein;

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wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;

- H) substituted alkynyl of from 1 to 3 substituents selected from:
- 1) alkoxy as defined in F1 herein;
 - 2) substituted alkoxy as defined in F2 herein;
 - 3) acyl as defined in F7 herein;
 - 4) acylamino as defined in F8 herein;
 - 5) acyloxy as defined in F9 herein;
 - 6) amino;
 - 7) aminoacyl as defined in F11 herein;
 - 8) aminoacyloxy as defined in F12 herein;
 - 9) cyano;
 - 10) halogen selected from fluoro, chloro, bromo and iodo;
 - 11) hydroxyl;
 - 12) carboxyl;
 - 13) carboxylalkyl as defined in F17 herein;
 - 14) thiol;
 - 15) thioalkoxy as defined in F19 herein;
 - 16) substituted thioalkoxy as defined in F20 herein;
 - 17) aryl as defined in F21 herein;
 - 18) heteroaryl as defined in F22 herein;
 - 19) heterocyclic as defined in F23 herein;
 - 20) nitro;
 - 21) -SO-alkyl wherein alkyl is defined in A herein;
 - 22) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 23) -SO-aryl wherein aryl is defined in F21 herein;
 - 24) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 25) -SO₂-alkyl wherein alkyl is defined in A herein;
 - 26) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;

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- 27) -SO₂-aryl wherein aryl is defined in F21 herein;
 - 28) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 29) mono- and dialkylamino wherein alkyl is defined in A herein;
 - 30) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - 31) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - 32) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - 33) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein; and
 - 34) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- I) substituted cycloalkyl having 3 to 12 carbon atoms and from 1 to 5 substituents selected from the group consisting of:
- 1) hydroxy;
 - 2) acyl as defined in F7 herein;
 - 3) acyloxy as defined in F9 herein;
 - 4) alkyl as defined in A herein;
 - 5) substituted alkyl as defined in F herein;
 - 6) alkoxy as defined in F1 herein;
 - 7) substituted alkoxy as defined in F2 herein;
 - 8) alkenyl as defined in B herein;
 - 9) substituted alkenyl as defined in G herein;
 - 10) alkynyl as defined in C herein;
 - 11) substituted alkynyl as defined in H herein;

- E /
- 12) amino;
 - 13) aminoacyl as defined in F11 herein;
 - 14) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
 - 15) aryl as defined in F21 herein;
 - 16) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - 17) carboxyl;
 - 18) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - 19) cyano;
 - 20) halo selected from fluoro, chloro, bromo and iodo;
 - 21) nitro;
 - 22) heteroaryl as defined in F22 herein;
 - 23) thioalkoxy as defined in F19 herein;
 - 24) substituted thioalkoxy as defined in F20 herein; and
 - 25) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- J) substituted cycloalkenyl having from 4 to 8 carbon atoms and from 1 to 5 substituents selected from the group consisting of:
- 1) hydroxy;
 - 2) acyl as defined in F7 herein;
 - 3) acyloxy as defined in F9 herein;
 - 4) alkyl as defined in A herein;
 - 5) substituted alkyl as defined in F herein;
 - 6) alkoxy as defined in F1 herein;
 - 7) substituted alkoxy as defined in F2 herein;
 - 8) alkenyl as defined in B herein;
 - 9) substituted alkenyl as defined in G herein;

Σ /

- 10) alkynyl as defined in C herein;
 - 11) substituted alkynyl as defined in H herein;
 - 12) amino;
 - 13) aminoacyl as defined in F11 herein;
 - 14) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
 - 15) aryl as defined in F21 herein;
 - 16) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - 17) carboxyl;
 - 18) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - 19) cyano;
 - 20) halo selected from fluoro, chloro, bromo and iodo;
 - 21) nitro;
 - 22) heteroaryl as defined in F22 herein;
 - 23) thioalkoxy as defined in F19 herein;
 - 24) substituted thioalkoxy as defined in F20 herein; and
 - 25) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- K) aryl as defined in F21 herein;
 - L) heteroaryl as defined in F22 herein; and
 - M) heterocyclic as defined in F23 herein;

Z' is represented by the formula -CX'X"-, -T-CH₂- or -T-C(O)- where T is selected from the group consisting of oxygen, sulfur, -NR⁵ where R⁵ is:

- E /
- N) hydrogen;
 - O) acyl as defined in F7 herein;
 - P) alkyl as defined in A herein;
 - Q) aryl as defined in F21 herein; or
 - R) heteroaryl as defined in F22 herein;

X' is hydrogen, hydroxy or fluoro; X'' is hydrogen, hydroxy or fluoro, or X' and X'' together form an oxo group;

R² is selected from the group consisting of:

- S) alkyl as defined in A herein;
- T) alkenyl as defined in B herein;
- U) alkynyl as defined in C herein;
- V) substituted alkyl as defined in F herein;
- W) substituted alkenyl as defined in G herein;
- X) substituted alkynyl as defined in H herein;
- Y) cycloalkyl as defined in D herein;
- Z) aryl as defined in F21 herein;
- AA) heteroaryl as defined in F22 herein;
- BB) heterocyclic as defined in F23 herein;
- BB¹) 2-aminopyrid-6-yl;
- BB²) 2-methylcyclopentyl;
- BB³) cyclohex-2-enyl; and
- BB⁴) -(CH₂)₄NHC(O)OC(CH₃)₃

W, together with -C(H)_pC(=X)-, forms a:

- E /
- CC) cycloalkyl as defined in D herein;
 - DD) cycloalkenyl as defined in E herein;
 - EE) heterocyclic as defined in F23 herein;
 - FF) substituted cycloalkyl as defined in I herein; or
 - GG) substituted cycloalkenyl group as defined in J herein;

wherein each of said cycloalkyl, cycloalkenyl, heterocyclic, substituted cycloalkyl or substituted cycloalkenyl group is optionally fused to form a bi- or multi-fused ring system with one or more ring structures selected from the group consisting of:

- HH) cycloalkyl as defined in D herein;
- II) cycloalkenyl as defined in E herein;
- JJ) heterocyclic as defined in F23 herein;
- KK) aryl as defined in F21 herein; and
- LL) heteroaryl as defined in F22 herein;

which, in turn, each of such ring structures is optionally substituted with 1 to 4 substituents selected from the group consisting of:

- MM) hydroxyl;
- NN) halo as defined in F21 herein;
- OO) alkoxy as defined in F1 herein;
- PP) substituted alkoxy as defined in F2 herein;
- QQ) thioalkoxy as defined in F19 herein;
- RR) substituted thioalkoxy as defined in F20 herein;
- SS) nitro;
- TT) cyano;
- UU) carboxyl;
- VV) carboxyl esters;
- WW) alkyl as defined in A herein;
- XX) substituted alkyl as defined in F herein;
- YY) alkenyl as defined in B herein;

- ZZ) substituted alkenyl as defined in G herein;
- AAA) alkynyl as defined in C herein;
- BBB) substituted alkynyl as defined in H herein;
- CCC) amino;
- DDD) N-alkyl amino wherein alkyl is defined in A herein;
- EEE) N,N-dialkyl amino wherein alkyl is defined in A herein;
- FFF) N-substituted alkylamino wherein alkyl is defined in A herein;
- GGG) N-alkyl N-substituted alkylamino wherein alkyl is defined in A herein;
- HHH) N,N-disubstituted alkyl amino;
- III) -NHC(O)R⁴ where each R⁴ is independently selected from the group consisting of:
- 1) alkyl as defined in A herein;
 - 2) substituted alkyl as defined in F herein;
 - 3) aryl as defined in F21 herein;
- JJJ) -NHSO₂R⁴ wherein R⁴ is defined in III herein;
- KKK) -C(O)NH₂;
- LLL) -C(O)NHR⁴ where R⁴ is defined in III herein;
- MMM) -C(O)NR⁴R⁴ where R⁴ is defined in III herein;
- NNN) -S(O)R⁴ where R⁴ is defined in III herein;
- OOO) -S(O)₂R⁴ where R⁴ is defined in III herein;
- PPP) -S(O)₂NHR⁴ where R⁴ is defined in III herein; and
- QQQ) -S(O)₂NR⁴R⁴ where R⁴ is defined in III herein;

X is selected from the group consisting of oxo (=O), thioxo (=S), hydroxyl (-H, -OH), thiol (H, -SH) and hydro (H, H);

p is an integer equal to 0 or 1 such that when p is zero, the ring defined by W and -C(H)_pC(=X)- is unsaturated at the carbon atom of ring attachment to NH and when p is one, the ring is saturated at the carbon atom of ring attachment to NH;

or pharmaceutically acceptable salts thereof;

with the following provisos:

RRR. when R¹ is 3,5-difluorophenyl, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form a 2-(S)-indanol group;

SSS. when R¹ is phenyl, R² is -CH₃, Z' is -CH₂-, p is 1, then W, together with >CH and >C=X, does not form a trans-2-hydroxy-cyclohex-1-yl group;

TTT. when R¹ is cyclopropyl, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an N-methylcaprolactam group;

UUU. when R¹ is 4-chlorobenzoyl-CH₂-, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an 2,3-dihydro-1-methyl-5-phenyl-1H-1,4-benzodiazepin-2-one;

VVV. when R¹ is 2-phenylphenyl, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an 7-methyl-5,7-dihydro-6H-dibenz[b,d]azepin-6-one;

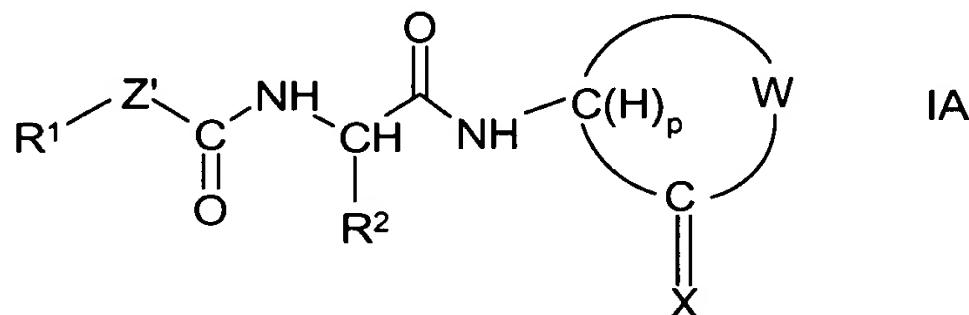
WWW. when R¹ is CH₃OC(O)CH₂-, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an 2,3-dihydro-1-(t-butylC(O)CH₂)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one;

XXX. when R¹ is 4-ethoxyphenyl, 2,4,6-trimethylphenyl, 4-phenylphenyl, CH₃OC(O)CH₂-, 4-HOCH₂-phenyl, 2,4,6-trifluorophenyl, 2-trifluoromethyl-4-fluorophenyl, or CH₃S-, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form a 2,3-dihydro-1-(N,N-diethylamino-CH₂CH₂)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one;

YYY. when R¹ is 2,6-difluorophenyl, R² is -CH₃, Z' is -CH(OH)-, and p is 1, then W, together with >CH and >C=X, does not form a 2,3-dihydro-1-(N,N-diethylamino-CH₂CH₂)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one; and

ZZZ. when the ring defined by W and -C(H)_pC(=X)- forms a cycloalkyl, then it does not form a cycloalkyl of from 3 to 8 carbon atoms optionally substituted with 1 to 3 alkyl groups.

119. (Currently Amended) A method for inhibiting β -amyloid peptide synthesis and/or release in a human subject thereby inhibiting onset of diseases mediated by β -amyloid peptide which method comprises administering to said human subject a pharmaceutical composition comprising a pharmaceutically inert carrier and an effective amount of a compound or a mixture of compounds of formula IA:



wherein R^1 is selected from the group consisting of:

- A) alkyl of from 1 to 10 carbon atoms;
- B) alkenyl of from 2 to 10 carbon atoms and 1-2 sites of alkenyl unsaturation;
- C) alkynyl of from 2 to 10 carbon atoms and from 1-2 sites of alkynyl unsaturation;
- D) cycloalkyl of from 3 to 12 carbon atoms;
- E) cycloalkenyl of from 4 to 8 carbon atoms;
- F) substituted alkyl of from 1 to 10 carbon atoms, having from 1 to 5 substituents selected from:
 - 1) alkoxy of from 1 to 10 carbon atoms;
 - 2) substituted alkoxy of the formula substituted alkyl-O- where substituted alkyl is as defined in F herein;
 - 3) cycloalkyl which is as defined in D herein;
 - 4) substituted cycloalkyl is defined in I herein;
 - 5) cycloalkenyl which is defined in E herein;
 - 6) substituted cycloalkenyl which is defined in J herein;
 - 7) acyl selected from alkyl-C(O)-, substituted alkyl-C(O)-,

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- cycloalkyl-C(O)-, substituted cycloalkyl-C(O)-, aryl-C(O)-, heteroaryl-C(O)- and heterocyclic-C(O)- wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein cycloalkyl is defined in D herein; wherein substituted cycloalkyl is defined in I herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- 8) acylamino having the formula -C(O)NRR where each R is independently hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, or heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 9) acyloxy selected from alkyl-C(O)O-, substituted alkyl-C(O)O-, cycloalkyl-C(O)O-, aryl-C(O)O-, heteroaryl-C(O)O-, and heterocyclic-C(O)O- wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein cycloalkyl is defined in D herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 10) amino;
 - 11) aminoacyl having the formula -NRC(O)R wherein each R is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, and heterocyclic; wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 12) aminoacyloxy having the formula -NRC(O)OR wherein each R is independently selected from the group consisting of hydrogen, alkyl,

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substituted alkyl, aryl, heteroaryl, and heterocyclic; wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;

- 13) cyano;
- 14) halogen;
- 15) hydroxyl;
- 16) carboxyl;
- 17) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
- 18) thiol;
- 19) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
- 20) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
- 21) aryl having from 6 to 14 ring carbon atoms, optionally substituted with from 1 to 5 substituents selected from the group consisting of:
 - a) hydroxy;
 - b) acyl as defined in F7 herein;
 - c) acyloxy as defined in F9 herein;
 - d) alkyl as defined in A herein;
 - e) substituted alkyl as defined in F herein;
 - f) alkoxy as defined in F1 herein;
 - g) substituted alkoxy as defined in F2 herein;
 - h) alkenyl as defined in B herein;
 - i) substituted alkenyl as defined in G herein;
 - j) alkynyl as defined in C herein;
 - k) substituted alkynyl as defined in H herein;
 - l) amino;

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- m) aminoacyl as defined in F11 herein;
 - n) acylamino as defined in F8 herein;
 - o) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
 - p) aryl as defined in F21 herein;
 - q) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - r) azido;
 - s) carboxyl;
 - t) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - u) cyano;
 - v) halo selected from fluoro, chloro, bromo and iodo;
 - w) nitro;
 - x) heteroaryl as defined in F22 herein;
 - y) heterocyclic as defined in F23 herein;
 - z) aminoacyloxy as defined in F12 herein;
 - aa) oxyacylamino having the formula -OC(O)NRR where each R is independently hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, or heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - bb) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - cc) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;

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- dd) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein;
 - ee) thioheteroaryloxy having the formula -S-heteroaryl wherein heteroaryl is defined F22 herein;
 - ff) -SO-alkyl wherein alkyl is defined in A herein;
 - gg) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
 - hh) -SO-aryl wherein aryl is defined in F21 herein;
 - ii) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
 - jj) -SO₂-alkyl wherein alkyl is defined in A herein;
 - kk) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
 - ll) -SO₂-aryl wherein aryl is defined in F21 herein;
 - mm) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - nn) trihalomethyl wherein halo is defined in I20 herein;
 - oo) mono- and dialkylamino wherein alkyl is defined in A herein;
 - pp) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - qq) mono- and di-aryl amino wherein aryl is defined in F21 herein;
 - rr) mono- and di-heteroaryl amino wherein heteroaryl is defined in F22 herein;
 - ss) mono- and di-heterocyclic amino wherein heterocyclic is defined in F23 herein;
 - tt) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F22 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;

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- 22) heteroaryl of from 1 to 15 ring carbon atoms and 1 to 4 ring heteroatoms selected from oxygen, nitrogen and sulfur, optionally substituted with from 1 to 5 substituents selected from:
- a) alkyl as defined in A herein;
 - b) substituted alkyl as defined in F herein;
 - c) alkoxy as defined in F1 herein;
 - d) substituted alkoxy as defined in F2 herein;
 - e) aryl as defined in F21 herein;
 - f) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - g) halo selected from fluoro, chloro, bromo and iodo;
 - h) nitro;
 - i) heteroaryl as defined in F22 herein;
 - j) thiol;
 - k) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - l) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - m) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein; and
 - n) trihalomethyl wherein halo is defined in I20 herein;
- 23) heterocyclic of from 1 to 15 ring carbon atoms and from 1 to 4 ring atoms selected from nitrogen, sulfur and oxygen, optionally substituted with from 1 to 5 substituents selected from:
- a) alkyl as defined in A herein;
 - b) substituted alkyl as defined in F herein;
 - c) alkoxy as defined in F1 herein;
 - d) substituted alkoxy as defined in F2 herein;
 - e) aryl as defined in F21 herein;

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- f) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - g) halo selected from fluoro, chloro, bromo and iodo;
 - h) nitro;
 - i) heteroaryl as defined in F22 herein;
 - j) thiol;
 - k) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - l) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - m) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein; and
 - n) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- 24) aryloxy of the formula -O-aryl wherein aryl is defined in F21 herein;
- 25) heteroaryloxy of the formula -O-heteroaryl wherein heteroaryl is defined in F22 herein;
- 26) hydroxyamino;
- 27) alkoxyamino wherein alkoxy is defined in F1 herein;
- 28) nitro;
- 29) -SO-alkyl wherein alkyl is defined in A herein;
- 30) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
- 31) -SO-aryl wherein aryl is defined in F21 herein;
- 32) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
- 33) -SO₂-alkyl wherein alkyl is defined in A herein;
- 34) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
- 35) -SO₂-aryl wherein aryl is defined in F21 herein;
- 36) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
- 37) mono- and dialkylamino wherein alkyl is defined in A herein;

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- 38) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
- 39) mono- and di-arylamino wherein aryl is defined in F21 herein;
- 40) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
- 42) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein;
- 43) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- G) substituted alkenyl having from 1 to 3 substituents selected from the group consisting of:
 - 1) alkoxy as defined in F1 herein;
 - 2) substituted alkoxy as defined in F2 herein;
 - 3) acyl as defined in F7 herein;
 - 4) acylamino as defined in F8 herein;
 - 5) acyloxy as defined in F9 herein;
 - 6) amino;
 - 7) aminoacyl as defined in F11 herein;
 - 8) aminoacyloxy as defined in F12 herein;
 - 9) cyano;
 - 10) halogen selected from fluoro, chloro, bromo and iodo;
 - 11) hydroxyl;
 - 12) carboxyl;
 - 13) carboxylalkyl as defined in F17 herein;
 - 14) thiol;

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- 15) thioalkoxy as defined in F19 herein;
 - 16) substituted thioalkoxy as defined in F20 herein;
 - 17) aryl as defined in F21 herein;
 - 18) heteroaryl as defined in F22 herein;
 - 19) heterocyclic as defined in F23 herein;
 - 20) nitro;
 - 21) -SO-alkyl wherein alkyl is defined in A herein;
 - 22) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 23) -SO-aryl wherein aryl is defined in F21 herein;
 - 24) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 25) -SO₂-alkyl wherein alkyl is defined in A herein;
 - 26) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 27) -SO₂-aryl wherein aryl is defined in F21 herein;
 - 28) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 29) mono- and dialkylamino wherein alkyl is defined in A herein;
 - 30) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - 31) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - 32) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - 33) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein; and
 - 34) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- H) substituted alkynyl of from 1 to 3 substituents selected from:

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- 1) alkoxy as defined in F1 herein;
- 2) substituted alkoxy as defined in F2 herein;
- 3) acyl as defined in F7 herein;
- 4) acylamino as defined in F8 herein;
- 5) acyloxy as defined in F9 herein;
- 6) amino;
- 7) aminoacyl as defined in F11 herein;
- 8) aminoacyloxy as defined in F12 herein;
- 9) cyano;
- 10) halogen selected from fluoro, chloro, bromo and iodo;
- 11) hydroxyl;
- 12) carboxyl;
- 13) carboxylalkyl as defined in F17 herein;
- 14) thiol;
- 15) thioalkoxy as defined in F19 herein;
- 16) substituted thioalkoxy as defined in F20 herein;
- 17) aryl as defined in F21 herein;
- 18) heteroaryl as defined in F22 herein;
- 19) heterocyclic as defined in F23 herein;
- 20) nitro;
- 21) -SO-alkyl wherein alkyl is defined in A herein;
- 22) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
- 23) -SO-aryl wherein aryl is defined in F21 herein;
- 24) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
- 25) -SO₂-alkyl wherein alkyl is defined in A herein;
- 26) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
- 27) -SO₂-aryl wherein aryl is defined in F21 herein;
- 28) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
- 29) mono- and dialkylamino wherein alkyl is defined in A herein;

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- 30) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - 31) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - 32) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - 33) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein; and
 - 34) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F21 herein; and wherein heterocyclic is defined in F23 herein;
- I) substituted cycloalkyl having 3 to 12 carbon atoms and from 1 to 5 substituents selected from the group consisting of:
- 1) hydroxy;
 - 2) acyl as defined in F7 herein;
 - 3) acyloxy as defined in F9 herein;
 - 4) alkyl as defined in A herein;
 - 5) substituted alkyl as defined in F herein;
 - 6) alkoxy as defined in F1 herein;
 - 7) substituted alkoxy as defined in F2 herein;
 - 8) alkenyl as defined in B herein;
 - 9) substituted alkenyl as defined in G herein;
 - 10) alkynyl as defined in C herein;
 - 11) substituted alkynyl as defined in H herein;
 - 12) amino;
 - 13) aminoacyl as defined in F11 herein;

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- 14) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
 - 15) aryl as defined in F21 herein;
 - 16) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - 17) carboxyl;
 - 18) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - 19) cyano;
 - 20) halo selected from fluoro, chloro, bromo and iodo;
 - 21) nitro;
 - 22) heteroaryl as defined in F22 herein;
 - 23) thioalkoxy as defined in F19 herein;
 - 24) substituted thioalkoxy as defined in F20 herein; and
 - 25) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- J) substituted cycloalkenyl having from 4 to 8 carbon atoms and from 1 to 5 substituents selected from the group consisting of:
- 1) hydroxy;
 - 2) acyl as defined in F7 herein;
 - 3) acyloxy as defined in F9 herein;
 - 4) alkyl as defined in A herein;
 - 5) substituted alkyl as defined in F herein;
 - 6) alkoxy as defined in F1 herein;
 - 7) substituted alkoxy as defined in F2 herein;
 - 8) alkenyl as defined in B herein;
 - 9) substituted alkenyl as defined in G herein;
 - 10) alkynyl as defined in C herein;
 - 11) substituted alkynyl as defined in H herein;

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- 12) amino;
- 13) aminoacyl as defined in F11 herein;
- 14) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
- 15) aryl as defined in F21 herein;
- 16) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
- 17) carboxyl;
- 18) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
- 19) cyano;
- 20) halo selected from fluoro, chloro, bromo and iodo;
- 21) nitro;
- 22) heteroaryl as defined in F22 herein;
- 23) thioalkoxy as defined in F19 herein;
- 24) substituted thioalkoxy as defined in F20 herein; and
- 25) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- K) aryl as defined in F21 herein;
- L) heteroaryl as defined in F22 herein; and
- M) heterocyclic as defined in F23 herein;

Z' is represented by the formula -CX'X"-, -T-CH₂- or -T-C(O)- where T is selected from the group consisting of oxygen, sulfur, -NR⁵ where R⁵ is:

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- N) hydrogen;
 - O) acyl as defined in F7 herein;
 - P) alkyl as defined in A herein;
 - Q) aryl as defined in F21 herein; or
 - R) heteroaryl as defined in F22 herein;

X' is hydrogen, hydroxy or fluoro; X'' is hydrogen, hydroxy or fluoro, or X' and X'' together form an oxo group;

R² is selected from the group consisting of:

- S) alkyl as defined in A herein;
- T) alkenyl as defined in B herein;
- U) alkynyl as defined in C herein;
- V) substituted alkyl as defined in F herein;
- W) substituted alkenyl as defined in G herein;
- X) substituted alkynyl as defined in H herein;
- Y) cycloalkyl as defined in D herein;
- Z) aryl as defined in F21 herein;
- AA) heteroaryl as defined in F22 herein;
- BB) heterocyclic as defined in F23 herein;
- BB¹) 2-aminopyrid-6-yl;
- BB²) 2-methylcyclopentyl;
- BB³) cyclohex-2-enyl; and
- BB⁴) -(CH₂)₄NHC(O)OC(CH₃)₃

W, together with -C(H)_pC(=X)-, forms a:

- CC) cycloalkyl as defined in D herein;
- DD) cycloalkenyl as defined in E herein;
- EE) heterocyclic as defined in F23 herein;
- FF) substituted cycloalkyl as defined in I herein; or
- GG) substituted cycloalkenyl group as defined in J herein;

wherein each of said cycloalkyl, cycloalkenyl, heterocyclic, substituted cycloalkyl or substituted cycloalkenyl group is optionally fused to form a bi- or multi-fused ring system with one or more ring structures selected from the group consisting of:

- HH) cycloalkyl as defined in D herein;
- II) cycloalkenyl as defined in E herein;
- JJ) heterocyclic as defined in F23 herein;
- KK) aryl as defined in F21 herein; and
- LL) heteroaryl as defined in F22 herein;

which, in turn, each of such ring structures is optionally substituted with 1 to 4 substituents selected from the group consisting of:

- MM) hydroxyl;
- NN) halo as defined in F21 herein;
- OO) alkoxy as defined in F1 herein;
- PP) substituted alkoxy as defined in F2 herein;
- QQ) thioalkoxy as defined in F19 herein;
- RR) substituted thioalkoxy as defined in F20 herein;
- SS) nitro;
- TT) cyano;
- UU) carboxyl;
- VV) carboxyl esters;
- WW) alkyl as defined in A herein;
- XX) substituted alkyl as defined in F herein;
- YY) alkenyl as defined in B herein;

- ZZ) substituted alkenyl as defined in G herein;
- AAA) alkynyl as defined in C herein;
- BBB) substituted alkynyl as defined in H herein;
- CCC) amino;
- DDD) N-alkyl amino wherein alkyl is defined in A herein;
- EEE) N,N-dialkyl amino wherein alkyl is defined in A herein;
- FFF) N-substituted alkylamino wherein alkyl is defined in A herein;
- GGG) N-alkyl N-substituted alkylamino wherein alkyl is defined in A herein;
- HHH) N,N-disubstituted alkyl amino;
- III) -NHC(O)R⁴ where each R⁴ is independently selected from the group consisting of:
- 1) alkyl as defined in A herein;
 - 2) substituted alkyl as defined in F herein;
 - 3) aryl as defined in F21 herein;
- JJJ) -NHSO₂R⁴ wherein R⁴ is defined in III herein;
- KKK) -C(O)NH₂;
- LLL) -C(O)NHR⁴ where R⁴ is defined in III herein;
- MMM) -C(O)NR⁴R⁴ where R⁴ is defined in III herein;
- NNN) -S(O)R⁴ where R⁴ is defined in III herein;
- OOO) -S(O)₂R⁴ where R⁴ is defined in III herein;
- PPP) -S(O)₂NHR⁴ where R⁴ is defined in III herein; and
- QQQ) -S(O)₂NR⁴R⁴ where R⁴ is defined in III herein;

X is selected from the group consisting of oxo (=O), thioxo (=S), hydroxyl (-H, -OH), thiol (H, -SH) and hydro (H, H);

p is an integer equal to 0 or 1 such that when p is zero, the ring defined by W and -C(H)_pC(=X)- is unsaturated at the carbon atom of ring attachment to NH and when p is one, the ring is saturated at the carbon atom of ring attachment to NH;

or pharmaceutically acceptable salts thereof;

with the following provisos:

E1 RRR. when R^1 is 3,5-difluorophenyl, R^2 is -CH₃, Z' is -CH₂- $,$ and p is 1, then W, together with >CH and >C=X, does not form a 2-(S)-indanol group;

SSS. when R^1 is phenyl, R^2 is -CH₃, Z' is -CH₂- $,$ p is 1, then W, together with >CH and >C=X, does not form a trans-2-hydroxy-cyclohex-1-yl group;

TTT. when R^1 is cyclopropyl, R^2 is -CH₃, Z' is -CH₂- $,$ and p is 1, then W, together with >CH and >C=X, does not form an N-methylcaprolactam group;

UUU. when R^1 is 4-chlorobenzoyl-CH₂- $,$ R^2 is -CH₃, Z' is -CH₂- $,$ and p is 1, then W, together with >CH and >C=X, does not form an 2,3-dihydro-1-methyl-5-phenyl-1H-1,4-benzodiazepin-2-one;

VVV. when R^1 is 2-phenylphenyl, R^2 is -CH₃, Z' is -CH₂- $,$ and p is 1, then W, together with >CH and >C=X, does not form an 7-methyl-5,7-dihydro-6H-dibenz[b,d]azepin-6-one;

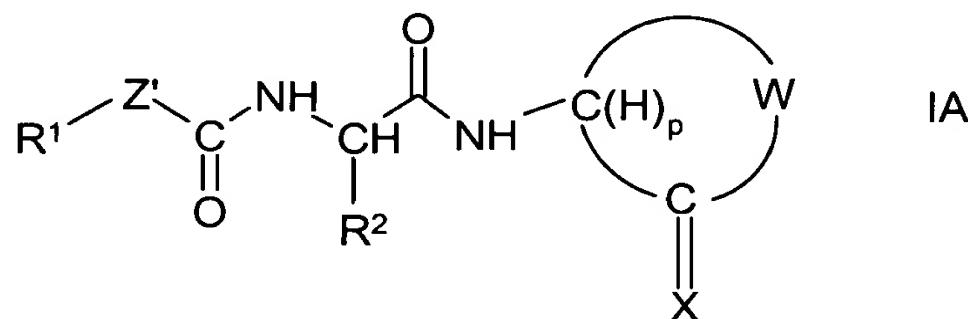
WWW. when R^1 is CH₃OC(O)CH₂- $,$ R^2 is -CH₃, Z' is -CH₂- $,$ and p is 1, then W, together with >CH and >C=X, does not form an 2,3-dihydro-1-(*t*-butylC(O)CH₂-)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one;

XXX. when R^1 is 4-ethoxyphenyl, 2,4,6-trimethylphenyl, 4-phenylphenyl, CH₃OC(O)CH₂- $,$ 4-HOCH₂-phenyl, 2,4,6-trifluorophenyl, 2-trifluoromethyl-4-fluorophenyl, or CH₃S-, R^2 is -CH₃, Z' is -CH₂- $,$ and p is 1, then W, together with >CH and >C=X, does not form a 2,3-dihydro-1-(N,N-diethylamino-CH₂CH₂-)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one;

YYY. when R^1 is 2,6-difluorophenyl, R^2 is -CH₃, Z' is -CH(OH)- $,$ and p is 1, then W, together with >CH and >C=X, does not form a 2,3-dihydro-1-(N,N-diethylamino-CH₂CH₂-)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one;

ZZZ. when the ring defined by W and -C(H)_pC(=X)- forms a cycloalkyl, then it does not form a cycloalkyl of from 3 to 8 carbon atoms optionally substituted with 1 to 3 alkyl groups.

120. (Currently Amended) A method for treating a human subject with AD in order to inhibit further deterioration in the condition of said human subject which method comprises administering to said subject a pharmaceutical composition comprising a pharmaceutically inert carrier and an effective amount of a compound or a mixture of compounds of formula IA:



wherein R¹ is selected from the group consisting of:

- A) alkyl of from 1 to 10 carbon atoms;
- B) alkenyl of from 2 to 10 carbon atoms and 1-2 sites of alkenyl unsaturation;
- C) alkynyl of from 2 to 10 carbon atoms and from 1-2 sites of alkynyl unsaturation;
- D) cycloalkyl of from 3 to 12 carbon atoms;
- E) cycloalkenyl of from 4 to 8 carbon atoms;
- F) substituted alkyl of from 1 to 10 carbon atoms, having from 1 to 5 substituents selected from:
 - 1) alkoxy of from 1 to 10 carbon atoms;
 - 2) substituted alkoxy of the formula substituted alkyl-O- where substituted alkyl is as defined in F herein;
 - 3) cycloalkyl which is as defined in D herein;
 - 4) substituted cycloalkyl is defined in I herein;
 - 5) cycloalkenyl which is defined in E herein;
 - 6) substituted cycloalkenyl which is defined in J herein;
 - 7) acyl selected from alkyl-C(O)-, substituted alkyl-C(O)-,

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- cycloalkyl-C(O)-, substituted cycloalkyl-C(O)-, aryl-C(O)-, heteroaryl-C(O)- and heterocyclic-C(O)- wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein cycloalkyl is defined in D herein; wherein substituted cycloalkyl is defined in I herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- 8) acylamino having the formula -C(O)NRR where each R is independently hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, or heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 9) acyloxy selected from alkyl-C(O)O-, substituted alkyl-C(O)O-, cycloalkyl-C(O)O-, aryl-C(O)O-, heteroaryl-C(O)O-, and heterocyclic-C(O)O- wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein cycloalkyl is defined in D herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 10) amino;
 - 11) aminoacyl having the formula -NRC(O)R wherein each R is independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, and heterocyclic; wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - 12) aminoacyloxy having the formula -NRC(O)OR wherein each R is independently selected from the group consisting of hydrogen, alkyl,

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- substituted alkyl, aryl, heteroaryl, and heterocyclic; wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- 13) cyano;
 - 14) halogen;
 - 15) hydroxyl;
 - 16) carboxyl;
 - 17) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - 18) thiol;
 - 19) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - 20) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - 21) aryl having from 6 to 14 ring carbon atoms, optionally substituted with from 1 to 5 substituents selected from the group consisting of:
 - a) hydroxy;
 - b) acyl as defined in F7 herein;
 - c) acyloxy as defined in F9 herein;
 - d) alkyl as defined in A herein;
 - e) substituted alkyl as defined in F herein;
 - f) alkoxy as defined in F1 herein;
 - g) substituted alkoxy as defined in F2 herein;
 - h) alkenyl as defined in B herein;
 - i) substituted alkenyl as defined in G herein;
 - j) alkynyl as defined in C herein;
 - k) substituted alkynyl as defined in H herein;
 - l) amino;

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- m) aminoacyl as defined in F11 herein;
 - n) acylamino as defined in F8 herein;
 - o) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
 - p) aryl as defined in F21 herein;
 - q) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - r) azido;
 - s) carboxyl;
 - t) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - u) cyano;
 - v) halo selected from fluoro, chloro, bromo and iodo;
 - w) nitro;
 - x) heteroaryl as defined in F22 herein;
 - y) heterocyclic as defined in F23 herein;
 - z) aminoacyloxy as defined in F12 herein;
 - aa) oxyacylamino having the formula -OC(O)NRR where each R is independently hydrogen, alkyl, substituted alkyl, aryl, heteroaryl, or heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
 - bb) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - cc) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;

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- dd) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein;
 - ee) thioheteroaryloxy having the formula -S-heteroaryl wherein heteroaryl is defined F22 herein;
 - ff) -SO-alkyl wherein alkyl is defined in A herein;
 - gg) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
 - hh) -SO-aryl wherein aryl is defined in F21 herein;
 - ii) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
 - jj) -SO₂-alkyl wherein alkyl is defined in A herein;
 - kk) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
 - ll) -SO₂-aryl wherein aryl is defined in F21 herein;
 - mm) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - nn) trihalomethyl wherein halo is defined in I20 herein;
 - oo) mono- and dialkylamino wherein alkyl is defined in A herein;
 - pp) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - qq) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - rr) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - ss) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein;
 - tt) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;

- E /
- 22) heteroaryl of from 1 to 15 ring carbon atoms and 1 to 4 ring heteroatoms selected from oxygen, nitrogen and sulfur, optionally substituted with from 1 to 5 substituents selected from:
- a) alkyl as defined in A herein;
 - b) substituted alkyl as defined in F herein;
 - c) alkoxy as defined in F1 herein;
 - d) substituted alkoxy as defined in F2 herein;
 - e) aryl as defined in F21 herein;
 - f) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - g) halo selected from fluoro, chloro, bromo and iodo;
 - h) nitro;
 - i) heteroaryl as defined in F22 herein;
 - j) thiol;
 - k) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - l) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - m) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein; and
 - n) trihalomethyl wherein halo is defined in I20 herein;
- 23) heterocyclic of from 1 to 15 ring carbon atoms and from 1 to 4 ring atoms selected from nitrogen, sulfur and oxygen, optionally substituted with from 1 to 5 substituents selected from:
- a) alkyl as defined in A herein;
 - b) substituted alkyl as defined in F herein;
 - c) alkoxy as defined in F1 herein;
 - d) substituted alkoxy as defined in F2 herein;
 - e) aryl as defined in F21 herein;

- E /
- f) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - g) halo selected from fluoro, chloro, bromo and iodo;
 - h) nitro;
 - i) heteroaryl as defined in F22 herein;
 - j) thiol;
 - k) thioalkoxy having the formula -S-alkyl, wherein alkyl is defined in A herein;
 - l) substituted thioalkoxy having the formula -S-substituted alkyl, wherein substituted alkyl is defined in F herein;
 - m) thioaryloxy having the formula -S-aryl wherein aryl is defined in F21 herein; and
 - n) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
 - 24) aryloxy of the formula -O-aryl wherein aryl is defined in F21 herein;
 - 25) heteroaryloxy of the formula -O-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 26) hydroxyamino;
 - 27) alkoxyamino wherein alkoxy is defined in F1 herein;
 - 28) nitro;
 - 29) -SO-alkyl wherein alkyl is defined in A herein;
 - 30) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 31) -SO-aryl wherein aryl is defined in F21 herein;
 - 32) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 33) -SO₂-alkyl wherein alkyl is defined in A herein;
 - 34) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 35) -SO₂-aryl wherein aryl is defined in F21 herein;
 - 36) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 37) mono- and dialkylamino wherein alkyl is defined in A herein;

- E /
- 38) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - 39) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - 40) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - 41) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein;
 - 42) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- G) substituted alkenyl having from 1 to 3 substituents selected from the group consisting of:
- 1) alkoxy as defined in F1 herein;
 - 2) substituted alkoxy as defined in F2 herein;
 - 3) acyl as defined in F7 herein;
 - 4) acylamino as defined in F8 herein;
 - 5) acyloxy as defined in F9 herein;
 - 6) amino;
 - 7) aminoacyl as defined in F11 herein;
 - 8) aminoacyloxy as defined in F12 herein;
 - 9) cyano;
 - 10) halogen selected from fluoro, chloro, bromo and iodo;
 - 11) hydroxyl;
 - 12) carboxyl;
 - 13) carboxylalkyl as defined in F17 herein;
 - 14) thiol;

- E /
- 15) thioalkoxy as defined in F19 herein;
 - 16) substituted thioalkoxy as defined in F20 herein;
 - 17) aryl as defined in F21 herein;
 - 18) heteroaryl as defined in F22 herein;
 - 19) heterocyclic as defined in F23 herein;
 - 20) nitro;
 - 21) -SO-alkyl wherein alkyl is defined in A herein;
 - 22) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 23) -SO-aryl wherein aryl is defined in F21 herein;
 - 24) -SO-heteroaryl wherein heteroaryl is defined in F23 herein;
 - 25) -SO₂-alkyl wherein alkyl is defined in A herein;
 - 26) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 27) -SO₂-aryl wherein aryl is defined in F21 herein;
 - 28) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 29) mono- and dialkylamino wherein alkyl is defined in A herein;
 - 30) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - 31) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - 32) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - 33) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein; and
 - 34) unsymmetric di-substituted amino having different substituents selected from alkyl , substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- H) substituted alkynyl of from 1 to 3 substituents selected from:

- E /
- 1) alkoxy as defined in F1 herein;
 - 2) substituted alkoxy as defined in F2 herein;
 - 3) acyl as defined in F7 herein;
 - 4) acylamino as defined in F8 herein;
 - 5) acyloxy as defined in F9 herein;
 - 6) amino;
 - 7) aminoacyl as defined in F11 herein;
 - 8) aminoacyloxy as defined in F12 herein;
 - 9) cyano;
 - 10) halogen selected from fluoro, chloro, bromo and iodo;
 - 11) hydroxyl;
 - 12) carboxyl;
 - 13) carboxylalkyl as defined in F17 herein;
 - 14) thiol;
 - 15) thioalkoxy as defined in F19 herein;
 - 16) substituted thioalkoxy as defined in F20 herein;
 - 17) aryl as defined in F21 herein;
 - 18) heteroaryl as defined in F22 herein;
 - 19) heterocyclic as defined in F23 herein;
 - 20) nitro;
 - 21) -SO-alkyl wherein alkyl is defined in A herein;
 - 22) -SO-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 23) -SO-aryl wherein aryl is defined in F21 herein;
 - 24) -SO-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 25) -SO₂-alkyl wherein alkyl is defined in A herein;
 - 26) -SO₂-substituted alkyl wherein substituted alkyl is defined in F herein;
 - 27) -SO₂-aryl wherein aryl is defined in F21 herein;
 - 28) -SO₂-heteroaryl wherein heteroaryl is defined in F22 herein;
 - 29) mono- and dialkylamino wherein alkyl is defined in A herein;

- E /
- 30) mono- and di-substituted alkylamino wherein substituted alkyl is defined in F herein;
 - 31) mono- and di-arylamino wherein aryl is defined in F21 herein;
 - 32) mono- and di-heteroarylamino wherein heteroaryl is defined in F22 herein;
 - 33) mono- and di-heterocyclicamino wherein heterocyclic is defined in F23 herein; and
 - 34) unsymmetric di-substituted amino having different substituents selected from alkyl, substituted alkyl, aryl, heteroaryl and heterocyclic wherein alkyl is defined in A herein; wherein substituted alkyl is defined in F herein; wherein aryl is defined in F21 herein; wherein heteroaryl is defined in F22 herein; and wherein heterocyclic is defined in F23 herein;
- I) substituted cycloalkyl having 3 to 12 carbon atoms and from 1 to 5 substituents selected from the group consisting of:
- 1) hydroxy;
 - 2) acyl as defined in F7 herein;
 - 3) acyloxy as defined in F9 herein;
 - 4) alkyl as defined in A herein;
 - 5) substituted alkyl as defined in F herein;
 - 6) alkoxy as defined in F1 herein;
 - 7) substituted alkoxy as defined in F2 herein;
 - 8) alkenyl as defined in B herein;
 - 9) substituted alkenyl as defined in G herein;
 - 10) alkynyl as defined in C herein;
 - 11) substituted alkynyl as defined in H herein;
 - 12) amino;
 - 13) aminoacyl as defined in F11 herein;

- E /
- 14) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
 - 15) aryl as defined in F21 herein;
 - 16) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
 - 17) carboxyl;
 - 18) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
 - 19) cyano;
 - 20) halo selected from fluoro, chloro, bromo and iodo;
 - 21) nitro;
 - 22) heteroaryl as defined in F22 herein;
 - 23) thioalkoxy as defined in F19 herein;
 - 24) substituted thioalkoxy as defined in F20 herein; and
 - 25) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- J) substituted cycloalkenyl having from 4 to 8 carbon atoms and from 1 to 5 substituents selected from the group consisting of:
- 1) hydroxy;
 - 2) acyl as defined in F7 herein;
 - 3) acyloxy as defined in F9 herein;
 - 4) alkyl as defined in A herein;
 - 5) substituted alkyl as defined in F herein;
 - 6) alkoxy as defined in F1 herein;
 - 7) substituted alkoxy as defined in F2 herein;
 - 8) alkenyl as defined in B herein;
 - 9) substituted alkenyl as defined in G herein;
 - 10) alkynyl as defined in C herein;
 - 11) substituted alkynyl as defined in H herein;

E /

- 12) amino;
- 13) aminoacyl as defined in F11 herein;
- 14) alkaryl of the formula -alkylene-aryl having 8 carbon atoms in the alkylene moiety and aryl is defined in F21 herein;
- 15) aryl as defined in F21 herein;
- 16) aryloxy having the formula -O-aryl wherein aryl is defined in F21 herein;
- 17) carboxyl;
- 18) carboxylalkyl having the formula "-C(O)Oalkyl" wherein alkyl is defined in A herein;
- 19) cyano;
- 20) halo selected from fluoro, chloro, bromo and iodo;
- 21) nitro;
- 22) heteroaryl as defined in F22 herein;
- 23) thioalkoxy as defined in F19 herein;
- 24) substituted thioalkoxy as defined in F20 herein; and
- 25) trihalomethyl wherein halo is selected from fluoro, chloro, bromo and iodo;
- K) aryl as defined in F21 herein;
- L) heteroaryl as defined in F22 herein; and
- M) heterocyclic as defined in F23 herein;

Z' is represented by the formula -CX'X"-, -T-CH₂- or -T-C(O)- where T is selected from the group consisting of oxygen, sulfur, -NR⁵ where R⁵ is:

- E /
- N) hydrogen;
 - O) acyl as defined in F7 herein;
 - P) alkyl as defined in A herein;
 - Q) aryl as defined in F21 herein; or
 - R) heteroaryl as defined in F22 herein;

X' is hydrogen, hydroxy or fluoro; X'' is hydrogen, hydroxy or fluoro, or X' and X'' together form an oxo group;

R² is selected from the group consisting of:

- S) alkyl as defined in A herein;
- T) alkenyl as defined in B herein;
- U) alkynyl as defined in C herein;
- V) substituted alkyl as defined in F herein;
- W) substituted alkenyl as defined in G herein;
- X) substituted alkynyl as defined in H herein;
- Y) cycloalkyl as defined in D herein;
- Z) aryl as defined in F21 herein;
- AA) heteroaryl as defined in F22 herein;
- BB) heterocyclic as defined in F23 herein;
- BB¹) 2-aminopyrid-6-yl;
- BB²) 2-methylcyclopentyl;
- BB³) cyclohex-2-enyl; and
- BB⁴) -(CH₂)₄NHC(O)OC(CH₃)₃

W, together with $-C(H)_pC(=X)-$, forms a:

- CC) cycloalkyl as defined in D herein;
- DD) cycloalkenyl as defined in E herein;
- EE) heterocyclic as defined in F23 herein;
- FF) substituted cycloalkyl as defined in I herein; or
- GG) substituted cycloalkenyl group as defined in J herein;

wherein each of said cycloalkyl, cycloalkenyl, heterocyclic, substituted cycloalkyl or substituted cycloalkenyl group is optionally fused to form a bi- or multi-fused ring system with one or more ring structures selected from the group consisting of:

- HH) cycloalkyl as defined in D herein;
- II) cycloalkenyl as defined in E herein;
- JJ) heterocyclic as defined in F23 herein;
- KK) aryl as defined in F21 herein; and
- LL) heteroaryl as defined in F22 herein;

which, in turn, each of such ring structures is optionally substituted with 1 to 4 substituents selected from the group consisting of:

- MM) hydroxyl;
- NN) halo as defined in F21 herein;
- OO) alkoxy as defined in F1 herein;
- PP) substituted alkoxy as defined in F2 herein;
- QQ) thioalkoxy as defined in F19 herein;
- RR) substituted thioalkoxy as defined in F20 herein;
- SS) nitro;
- TT) cyano;
- UU) carboxyl;
- VV) carboxyl esters;
- WW) alkyl as defined in A herein;
- XX) substituted alkyl as defined in F herein;
- YY) alkenyl as defined in B herein;

- E /
- ZZ) substituted alkenyl as defined in G herein;
 - AAA) alkynyl as defined in C herein;
 - BBB) substituted alkynyl as defined in H herein;
 - CCC) amino;
 - DDD) N-alkyl amino wherein alkyl is defined in A herein;
 - EEE) N,N-dialkyl amino wherein alkyl is defined in A herein;
 - FFF) N-substituted alkylamino wherein alkyl is defined in A herein;
 - GGG) N-alkyl N-substituted alkylamino wherein alkyl is defined in A herein;
 - HHH) N,N-disubstituted alkyl amino;
 - III) -NHC(O)R⁴ where each R⁴ is independently selected from the group consisting of:
 - 1) alkyl as defined in A herein;
 - 2) substituted alkyl as defined in F herein;
 - 3) aryl as defined in F21 herein;
 - JJJ) -NHSO₂R⁴ wherein R⁴ is defined in III herein;
 - KKK) -C(O)NH₂;
 - LLL) -C(O)NHR⁴ where R⁴ is defined in III herein;
 - MMM) -C(O)NR⁴R⁴ where R⁴ is defined in III herein;
 - NNN) -S(O)R⁴ where R⁴ is defined in III herein;
 - OOO) -S(O)₂R⁴ where R⁴ is defined in III herein;
 - PPP) -S(O)₂NHR⁴ where R⁴ is defined in III herein; and
 - QQQ) -S(O)₂NR⁴R⁴ where R⁴ is defined in III herein;

X is selected from the group consisting of oxo (=O), thioxo (=S), hydroxyl (-H, -OH), thiol (H, -SH) and hydro (H, H);

p is an integer equal to 0 or 1 such that when *p* is zero, the ring defined by W and -C(H)_pC(=X)- is unsaturated at the carbon atom of ring attachment to NH and when *p* is one, the ring is saturated at the carbon atom of ring attachment to NH;

or pharmaceutically acceptable salts thereof;

with the following provisos:

RRR. when R¹ is 3,5-difluorophenyl, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form a 2-(S)-indanol group;

E / SSS. when R¹ is phenyl, R² is -CH₃, Z' is -CH₂-, p is 1, then W, together with >CH and >C=X, does not form a trans-2-hydroxy-cyclohex-1-yl group;

TTT. when R¹ is cyclopropyl, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an N-methylcaprolactam group;

UUU. when R¹ is 4-chlorobenzoyl-CH₂-, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an 2,3-dihydro-1-methyl-5-phenyl-1H-1,4-benzodiazepin-2-one;

VVV. when R¹ is 2-phenylphenyl, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an 7-methyl-5,7-dihydro-6H-dibenz[b,d]azepin-6-one;

WWW. when R¹ is CH₃OC(O)CH₂-, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form an 2,3-dihydro-1-(t-butylC(O)CH₂)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one;

XXX. when R¹ is 4-ethoxyphenyl, 2,4,6-trimethylphenyl, 4-phenylphenyl, CH₃OC(O)CH₂-, 4-HOCH₂-phenyl, 2,4,6-trifluorophenyl, 2-trifluoromethyl-4-fluorophenyl, or CH₃S-, R² is -CH₃, Z' is -CH₂-, and p is 1, then W, together with >CH and >C=X, does not form a 2,3-dihydro-1-(N,N-diethylamino-CH₂CH₂)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one;

YYY. when R¹ is 2,6-difluorophenyl, R² is -CH₃, Z' is -CH(OH)-, and p is 1, then W, together with >CH and >C=X, does not form a 2,3-dihydro-1-(N,N-diethylamino-CH₂CH₂)-5-(2-pyridyl)-1H-1,4-benzodiazepin-2-one; and

ZZZ. when the ring defined by W and -C(H)_pC(=X)- forms a cycloalkyl, then it does not form a cycloalkyl of from 3 to 8 carbon atoms optionally substituted with 1 to 3 alkyl groups.

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121-130. Canceled.